

A METHOD OF PRODUCING A FIBRE REINFORCED STRUCTURAL ELEMENT

EdTola
12-19-07

This application is a 35 USC 371 of PCT/DK03/00010, filed 01/09/2003.

The present invention relates generally to the technique of producing large fibre reinforced structural elements and in particular a technique of fixating bolt fixtures or bolts in the fibre reinforced structural element.

In the present context, the term a fibre reinforced structural element is construed as a generic term comprising any structural element made from resin or plastics based materials being fibre reinforced by means of fibres such as glass fibre, carbon fibre or kevlar fibre reinforced structural elements produced from a resin material such as polyester, vinyl ester, phenol or epoxy. Further the structural element may in itself constitute a load-carrying element or a supporting element such as an element of a building structure, a facade element, a bridge, a component of a wind mill, a component of a ship such as a deck component.

In the present context, the terms a bolt fixture, a bolt and a fitting are to be construed as generic terms comprising any elements such as a bolt, the shaft of the bolt, a nut, a hook, a pin with external thread, an arresting element e.g. a press fitting or snap fitting closure element etc. serving the purpose of co-operating with another fixating element e.g. a congruent or mating fixating element for the fixation of a structural element which supports the bolt fixture, bolt or fitting, or a fitting including an internal thread or a differently configured body including a protruding outer thread part or an inner thread for receiving the thread of a bolt.

Within the industry the use of fibre reinforced structural elements has increased rapidly within the last decades, basically inspired by the success of the use of such elements within the wind mill industry. Apart from wind mill components such as the blades of a wind mill, fibre reinforced structural elements have also gained success within the house-building industry and ship-building industry and even within certain technical fields in which metal structures have conventionally been used. As an example within the chemical industry or the galvanising- and zinc coating industry, conventional metal structures tend to have a fairly short life time due to the excessive corrosion impact whereas fibre reinforced structural elements including